

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fuel cell having at least a membrane electrode assembly ~~comprising~~comprising:
_____an electrolyte membrane, membrane;
_____a hydrogen electrode-side catalyst layer formed on one side thereof, and; and
_____an air electrode-side catalyst layer formed on the other side thereof,
_____in which~~wherein~~ a porosity of the hydrogen electrode-side catalyst layer is made to be lower than a porosity ~~of~~of the air electrode-side catalyst layer and a volume of pore space ~~of~~of the hydrogen electrode-side catalyst layer has a range of 1.0% to 3.0% of a total volume of the catalyst layer.
2. (Previously Presented) The fuel cell according to claim 1, wherein the hydrogen electrode-side catalyst layer and the air electrode-side catalyst layer each include ion-exchange resin and carbon carrier and a weight ratio of ion-exchange resin to carbon carrier of the hydrogen electrode-side catalyst layer is made to be larger than a weight ratio of ion-exchange resin to carbon carrier of the air electrode-side catalyst layer so that the porosity of the hydrogen electrode-side catalyst layer is made to be lower than the porosity of the air electrode-side catalyst layer.
3. (Currently Amended) The fuel cell according to claim 2, in which~~wherein~~ the weight ratio of ion-exchange resin to carbon carrier ~~of~~of the hydrogen electrode-side catalyst layer is greater than or equal to 1.5:1 and less than 3.0:1 and the weight ratio of ion-exchange resin to carbon carrier ~~of~~of the air electrode-side catalyst layer is greater than or equal to 0.4:1 and less than 1.5:1.

4. (Currently Amended) The fuel cell according to claim 2, ~~in which~~ wherein the volume of pore space of the air electrode-side catalyst layer has a range of 3% to 30% of the total volume of the catalyst layer.

5. (Currently Amended) A fuel cell having at least a membrane electrode assembly comprising comprising:

an electrolyte membrane, membrane; and

a hydrogen electrode-side catalyst layer formed on one side thereof, and an air electrode-side catalyst layer formed on the other side thereof,

in which wherein a porosity of the hydrogen electrode-side catalyst layer is made to be lower than a porosity of the air electrode-side catalyst layer,

wherein ~~the~~ the hydrogen electrode-side catalyst layer contains an additive having a particle particle diameter sized to fill a plurality of voids in a carbon carrier included in the hydrogen electrode-side catalyst layer so as to lower the porosity of the hydrogen electrode-side catalyst layer, layer, and

wherein a volume of pore space of the hydrogen electrode-side catalyst layer has a range of 1.0% to 3.0% of a total volume of the catalyst layer.

6. (Currently Amended) The fuel cell according to claim 5, ~~in which~~ wherein the average particle diameter of the additive is less than or equal to 0.3 μm .

7. (Currently Amended) The fuel cell according to claim 5, ~~in which~~ wherein ~~a volume of pore space of the hydrogen electrode-side catalyst layer has a range of 1.0% to 3.0% of the total volume of the catalyst layer and~~ a volume of pore space of the air electrode-side catalyst layer has a range of 3.0% to 30% of the total volume of the catalyst layer.

8. (Currently Amended) A fuel cell having at least a membrane electrode assembly comprising comprising:

an electrolyte membrane, membrane;

_____ a sprayed hydrogen electrode-side catalyst layer formed on one side thereof,
and thereof; and

_____ a non-sprayed air electrode-side catalyst layer formed on the other side thereof,
_____ in which wherein a porosity of the hydrogen electrode-side catalyst layer is
made to be lower than a porosity that of the air electrode-side catalyst layer.

_____ wherein ~~the~~ the hydrogen electrode-side catalyst layer is formed by spraying a
catalyst ink and the air electrode-side catalyst layer is formed by a transfer method so that the
porosity of the hydrogen electrode-side catalyst layer is made to be lower than that of the air
electrode-side catalyst layer, and

_____ wherein a volume of pore space of the hydrogen electrode-side catalyst layer
has a range of 1.0% to 3.0% of a total volume of the catalyst layer.

9. (Currently Amended) The fuel cell according to claim 2, in which wherein the
volume of pore space of the hydrogen electrode-side catalyst layer is 2% of the total volume
of the catalyst layer and a volume of pore space of the air electrode-side catalyst layer is 30%
of a~~the~~ total volume of the catalyst layer.